

## **CLAIM AMENDMENTS**

1. (currently amended) A biological sample processing system, comprising:  
a sample processing device;  
a biological sample carrier having a surface; and  
a transfer film on the surface of the carrier;  
wherein the carrier is adapted to mate with the device to form a chamber defined in part by the carrier such that at least a portion of the transfer film is included in the chamber; the carrier being adapted to position a biological sample within the chamber upon mating the carrier to the device and to prevent fluid flow across the chamber and carrier interface.

2. (previously presented) The biological sample processing system of claim 1, wherein the chamber is an extraction chamber.

3. (previously presented) A biological sample processing system,  
comprising:  
a sample processing device; and  
a biological sample carrier having a surface adapted to have a biological sample attached to the surface;  
wherein the carrier is adapted to mate with the device to form a reaction chamber defined in part by the carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the chamber; the carrier being adapted to introduce the sample to the reaction chamber upon mating the carrier to the device;  
wherein the sample processing device further includes a dilution chamber.

4. (previously presented) A biological sample processing system,  
comprising:  
a sample processing device; and

a biological sample carrier having a surface adapted to have a biological sample attached to the surface;

wherein the carrier is adapted to mate with the device to form a reaction chamber defined in part by the carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the chamber; the carrier being adapted to introduce the sample to the reaction chamber upon mating the carrier to the device;

wherein the sample processing device includes a pump.

Claims 5-24 (cancelled)

25. (previously presented) The biological sample processing system of claim 1,

wherein the sample processing device comprises a centrifuge tube.

26. (previously presented) A biological sample processing system,  
comprising:

a sample processing device; and

a biological sample carrier having a surface adapted to have a biological sample attached to the surface;

wherein the carrier is adapted to mate with the device to form a reaction chamber defined in part by the carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the chamber; the carrier being adapted to introduce the sample to the reaction chamber upon mating the carrier to the device;

wherein the sample processing device is a laminated assembly.

27. (previously presented) A biological sample processing system,  
comprising:

a sample processing device; and

a biological sample carrier having a surface adapted to have a biological sample attached to the surface;

wherein the carrier is adapted to mate with the device to form a reaction chamber defined in part by the carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the chamber; the carrier being adapted to introduce the sample to the reaction chamber upon mating the carrier to the device;

wherein the sample processing device is a laminated assembly and centrifuge tube.

28. (previously presented) A biological sample processing system, comprising:

a sample processing device including:

a first chamber having an opening, a first port, and a second port; and

a second chamber fluidly coupled to the first chamber via the second port;

and

a sample carrier having a surface adapted to have a biological sample attached to the surface; the sample carrier being adapted to mate with the device to close the opening on the first chamber such that at least a portion of the surface adapted to have the biological sample attached is included in the first chamber; the carrier being adapted to position the sample within the first chamber upon mating the carrier to the device.

29. (previously presented) A biological sample processing system, comprising:

a sample processing device including:

a first chamber having a first port and a second port; and

a second chamber fluidly coupled to the first chamber via the second port;

and

a sample carrier having a surface adapted to have a biological sample attached to the surface; the sample carrier being adapted to mate with the device to form the first chamber defined in part by the sample carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the first chamber; the carrier being adapted to introduce the sample to the reaction chamber upon mating the carrier to the device;

wherein the second port is a stop junction.

30. (previously presented) A biological sample processing system, comprising:

a sample processing device including:

a first chamber having an opening, a first port, and a second port; and

a second chamber fluidly coupled to the first chamber via the second port;

wherein the sample processing device includes a centrifuge tube; and

a sample carrier having a surface adapted to have a biological sample attached to the surface; the sample carrier being adapted to mate with the device to close the opening on the first chamber such that at least a portion of the surface adapted to have the biological sample attached is included in the first chamber; the carrier being adapted to position the sample within the first chamber upon mating the carrier to the device.

31. (previously presented) A biological sample processing system, comprising:

a sample processing device including:

a first chamber having a first port, a second port and a third port;

a first conduit;

a second chamber fluidly coupled to the first chamber via the second port and the first conduit; and

a second conduit fluidly coupled to the first chamber via the third port;

and

a sample carrier having a surface adapted to have a biological sample attached to the surface; the sample carrier being adapted to mate with the device to form the first chamber defined in part by the sample carrier such that at least a portion of the surface adapted to have a biological sample attached is included in the first chamber; the carrier being adapted to introduce the sample to the first chamber upon mating the carrier to the device.

32. (previously presented) The biological sample processing system of claim 31, wherein the second chamber is a fluid reservoir.

33. (previously presented) The biological sample processing system of claim 31, wherein the second chamber includes a pump.

34. (previously presented) The biological sample processing system of claim 31, wherein the sample processing device further includes a third chamber fluidly coupled to the first chamber via the second conduit.

35. (previously presented) The biological sample processing system of claim 34, wherein the sample processing device further includes a third conduit fluidly coupled to the third chamber.

36. (previously presented) The biological sample processing system of claim 31, wherein the sample processing device is a laminated assembly.

37. (previously presented) The biological sample processing system of claim 36, wherein the laminated assembly includes:

a first layer;

a second layer defining the second chamber, first conduit and second conduit;

a third layer defining a fill port and stop junction holes; and

a fourth layer defining the first chamber;

wherein the second layer is located between the first layer and third layer; the third layer being located between the second layer and fourth layer.

38. (previously presented) The biological sample processing system of claim 1, wherein the chamber is a reaction chamber.

39. (previously presented) The biological processing system of claim 28, wherein the first chamber is an extraction chamber.

40. (previously presented) The biological processing system of claim 28, wherein the first chamber is a reaction chamber.

41. (previously presented) The biological processing system of claim 30, wherein the first chamber is an extraction chamber.

42. (previously presented) The biological processing system of claim 30, wherein the first chamber is a reaction chamber.

43. (currently amended) A sample processing system, comprising:  
a sample processing device; and  
a biological sample carrier having a surface adapted to have a microdissected sample attached to the surface;  
wherein the carrier is adapted to mate with the device to form a chamber defined in part by the carrier such that at least a portion of the surface adapted to have a microdissected sample attached is included in the chamber; the carrier being adapted to position the sample within the chamber upon mating the carrier to the device and to prevent fluid flow across the chamber and carrier interface.

44. (previously presented) The biological processing system of claim 43, wherein the first chamber is an extraction chamber.

45. (previously presented) The biological processing system of claim 43, wherein the first chamber is a reaction chamber.

46. (previously presented) The biological processing system of claim 1, wherein the sample processing device further includes a dilution chamber.

47. (previously presented) The biological processing system of claim 1, wherein the sample processing device includes a pump.

48. (previously presented) The biological processing system of claim 1, wherein the sample processing device is a laminated assembly.
49. (previously presented) The biological processing system of claim 1, wherein the sample processing device comprises a centrifuge tube.
50. (previously presented) The biological processing system of claim 28, wherein the second port is a stop junction.
51. (previously presented) The biological processing system of claim 1, wherein the sample processing device comprises a fluidic circuit.
52. (previously presented) The biological processing system of claim 28, wherein the sample processing device comprises a fluidic circuit.
53. (previously presented) The biological processing system of claim 43, wherein the sample processing device comprises a fluidic circuit.
54. (new) The biological processing system of claim 43 wherein the surface is a transfer film attached to the carrier.